INDIANA
Epidemiology
NEWSLETTER

Indiana State Department of Health

Epidemiology Resource Center
2 North Meridian Street, 3-D
Indianapolis, IN 46204
317/233-7416

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Varicella Death Reported in Indiana

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On May 23, 2002, a previously healthy 11-year-old white female presented to the emergency room (ER) of Hospital A, with a history of fever, tachypnea, and varicella zoster infection for the last 12 days. The ER physician recognized the patient was in shock and she was immediately transported to the Pediatric Intensive Care Unit (PICU) of Hospital B. Upon arrival to the PICU, the patient was hypotensive and cyanotic. Her blood pressure was 58/33, temperature was 101.2° F, pulse rate was 180 beats per minute. At this time the patient was urgently intubated, but was poorly perfused with no pulses palpable. Cardiopulmonary resuscitation was initiated and continued approximately 33 minutes. Examination at this time revealed a severely encephalopathic child with occasional gasping respirations or other movements and no response to pain.

Further physical examination revealed a patient covered with severe vesicular eruptions that extended from her face over her entire trunk to involve the extremities below the level of the knees as well as below the level of the elbows. She had vesicular lesions in the interdigital areas of both hands and feet and there were a number of petechial lesions noted all over her body. Her entire trunk was covered with ulcerated necrotic lesions as well as some hemorrhagic lesions noted on her lower extremities.

The patient had been treated previously with Acyclovir for two days (beginning May 16), but was switched to Famvir on May 18 following some facial swelling thought to be from the Acyclovir. The patient completed a five-day course of Famvir.

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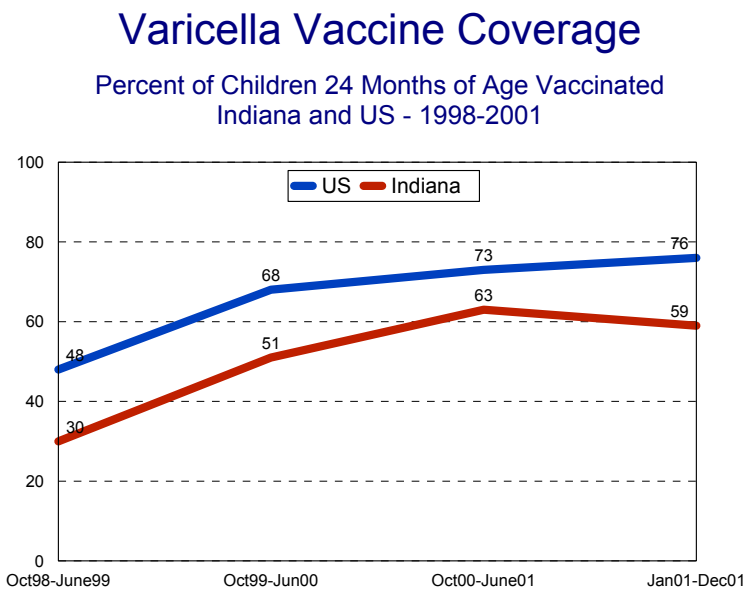
A blood culture revealed gram positive cocci, which was later identified as *Streptococcus pyogenes* (group A beta hemolytic strep). There was no laboratory analysis performed to specifically identify varicella virus as the agent causing the rash.

As the child's condition continued to deteriorate, the fact that this was an irreversible case of septic shock was described to the parents. The child died early in the morning on May 24, 2002. Due to the clarity and severity of the septicemia with which this child presented and the profound septic shock, it was decided that the cause of death was an obvious case of varicella zoster infection complicated by streptococcal sepsis. It was therefore concluded that an autopsy was not necessary.

This case was not vaccinated, but the mother reported that the child had a mild case of chickenpox when she was five or six years old. It was also reported that a number of chickenpox cases were occurring at the child's school and therefore the school exposure is considered the likely source of infection for this case.

Seven deaths due to varicella have been reported in Indiana from 1997 to 2002. During the four-year period from 1997-2000, a mean of 125.5 hospitalizations resulting from varicella infection has been reported through the Indiana Hospital Discharge Database.

According to the latest National Immunization Survey (Quarter 1, 2001 - Quarter 4, 2001), 58.9% (CI±5.3%) of infants 24 months of age born in Indiana from February 1998 to May 2000 were vaccinated with varicella vaccine. In the United States, 76.3% (CI±0.8%) of infants in the same age group were vaccinated with varicella vaccine.



Efforts to increase routine and catch-up varicella vaccination among children should include educating health-care providers that deaths and severe morbidity from varicella are preventable. Policies that delay vaccination of susceptible children until adolescence accept the considerable disease burden that occurs among children 2-11 years of age. The most effective strategy focuses on vaccinating children routinely at 12-18 months of age and vaccinating all susceptible older children and adolescents. Children have the highest disease incidence and are the group that serves as the primary source of transmission of varicella to groups at higher risk for severe disease, including adults and persons not eligible for vaccination. Most deaths and severe morbidity from varicella in children and adults can be prevented by implementing recommended policies for childhood vaccination.

DHHS Approves Public Health Preparedness and Response for Bioterrorism Cooperative Agreement

Emily Seevers, MPH
ISDH Epidemiology Resource Center

The Department of Health and Human Services (DHHS) has approved work plans that ISDH submitted for the Public Health Preparedness and Response for Bioterrorism Cooperative Agreement. The approval by DHHS allows for 21.1 million dollars in funding for enhancing state, local, and hospital preparedness and response for bioterrorism and other public health emergencies.

ISDH began working on bioterrorism preparedness and response from a grant funded by the Centers for Disease Control and Prevention (CDC) in 1999. Since that time both funding and work have increased. The 21.1 million dollars will supplement and considerably expand the already existing funding the state has been receiving. The events during the fall of 2001 and recognition that more public health infrastructure is needed to ensure safety and services for the public have placed the need for funding at a higher priority than ever before. Both state and local levels are being more completely funded as a result.

Of the funding, over 18 million dollars set forth in the cooperative agreement is from the CDC to assist and perform planning, preparedness, and response at the state and local levels. The goal of the supplemental funding is to build and strengthen existing public health infrastructure. The work plans for the funding are divided into six focus areas (A, B, C, E, F, and G) which each address a specific area in preparedness and response for bioterrorism and other public health emergencies.

Focus area A, **Preparedness Planning and Readiness Assessment**, provides strategic direction, coordination, and assessment for preparedness and response planning. This includes, but is not limited to, the creation of various advisory committees to address pertinent issues; collaboration of multi-agency efforts; and the development and completion of a comprehensive state bioterrorism plan.

Focus Area B, **Surveillance and Epidemiology Capacity**, provides public health surveillance, detection capabilities, epidemiological investigation, and response capacities. This includes, but is not limited to, the development of a reportable disease reporting system; rapid and effective investigation and response; exercised and effective state and local epidemiological response that accounts for surge capacity, mass prophylaxis, and immunizations.

Focus Area C, **Laboratory Capacity - Biological Agents**, improves laboratory communications and capabilities. This includes, but is not limited to, effective and rapid detection of biological agents; acquiring membership in the Laboratory Response Network; and obtaining adequate and secure facilities, reagents, and equipment.

Focus Area D, **Laboratory Capacity - Chemical Agents**, was not funded by CDC for any state this year.

Focus Area E, **Communication and Information Technology**, is designed to assess and strengthen information and communication. This includes, but is not limited to, the development of a shareable directory of information for those in public health; assurance of emergency communications; and secure data and information systems.

Focus Area F, **Health Risk Communication and Information**, is designed to enhance risk communications throughout the state. This includes, but is not limited to, a thorough assessment; development of a risk communication plan; and dissemination of information to educate the public.

Focus Area G, **Education and Training**, is designed to identify training needs and provide education for local and state levels. This includes, but is not limited to, assessment of needs; training and education to local and state level public health participants; and evaluation of effectiveness.

The Health Resources and Services Administration (HRSA) is providing 2.6 million dollars for hospital preparedness for bioterrorism. This portion of the funding includes, but is not limited to, a thorough assessment of surge capacity, already existing community planning efforts, and the training needs of Indiana hospitals will be performed. The assessment results will aid in the development of regional hospital plans that will address topics such as increasing capacity, isolation, quarantine, special populations, and security among others. In addition, the grant seeks to increase collaboration among health care facilities, EMS, as well as other local, state, and federal agencies.

To carry out the work at ISDH, the Public Health Preparedness and Emergency Response Division has been created. Roland Gamache, PhD, MBA, has been named the director of the new division and will work to coordinate activities. From the CDC and HRSA funding, ISDH plans to create 54 new positions, 18 of which will be field staff that will act as resources to local health departments, hospitals, and others involved in public health preparedness and response. Not only is the funding going to help the state of Indiana be better prepared for bioterrorism and other public health emergencies, but will also contribute heavily to building a stronger and more stable infrastructure for public health at all levels.

Free Education Programs on Bioterrorism Offered Through ISMA

Emily Seevers, MPH
ISDH Epidemiology Resource Center

Two educational programs, "Current Bioterrorism Threats: What You May Need to Know" and "Smallpox: An Overview of the Eradicated Disease that is still a Serious Public Health Threat", are currently available on-line, free of charge, through the Indiana State Medical Association (ISMA) website for anyone interested. The ISMA developed the Med Ed CME site in 2000 to deliver on-line, ongoing continuing medical education for physicians, practice managers, clinical and office staff and other health care professionals.

"Current Bioterrorism Threats: What You May Need to Know" offers an introductory overview of Category A biological agents that could potentially be used in a terrorist attack. The Centers for Disease Control and Prevention (CDC) consider category A agents as high-priority because they pose a risk to national security. The objectives of the program are to understand the threat; recognize likely agents; recognize signs of a possible bioterrorism event; and to understand the planned response by local, state, and federal authorities. The outline of the program includes the history of bioterrorism, types of terrorism attacks, biological agent overviews, surveillance issues, indexes of suspicion, disease reporting, roles of public health entities, and functions of the National Pharmaceutical Stockpile.

"Smallpox: An Overview of the Eradicated Disease that is still a Serious Public Health Threat" is a basic introductory program focused specifically on the issues surrounding a potential reintroduction of smallpox into society. Due to recent terrorist events there has been a realization that it may be necessary for those involved in health care, as well as the general public, to learn more about smallpox because of concerns that the potentially devastating disease could be reintroduced to susceptible populations. The objectives of the program are to recognize key characteristics of smallpox; identify the category of risk through diagnostic criteria; distinguish smallpox from other similar diseases; and to realize the current status, recommendations, procedures, and complication of the smallpox vaccine.

The smallpox program outlines the history, signs, symptoms, evaluation, differentiation, treatment, vaccine, and control of smallpox.

To access either program go, to www.ismanet.org and click on the yellow and blue the Med Ed CME link or go directly to the site at www.mededcme.com. Each course is an hour long, divided into 4 segments, using audio and slides. Full-text versions are available by clicking the button marked "Text Only Version". If you wish to listen to the audio version of the course and do not have Real Player, you may download a free version from the site as well. After registering on-line for the programs, you will have access to the course and all information for two weeks from the date of registration.

Who Do I Call?

Communicable Disease Responsibilities
Indiana State Department of Health
2 N. Meridian Street, 6-A
Indianapolis, IN 46203
Office Phone: (317) 233-7125
FAX: (317) 233-7805

In order to better serve the needs of health care providers and public health professionals, the list of disease responsibilities within the ISDH Communicable Disease Program is outlined below. During regular business hours (8:15-4:45 EST), callers are encouraged to contact the particular ISDH infectious disease professional listed in order to more effectively address specific issues. For assistance during non-business hours, please contact the ISDH toll-free at (866) 233-1237 and ask to speak to the infectious disease professional on call. This number is intended for medical and public health professionals, and is not intended for general distribution.

Julie Butwin, MSN—Chief Nurse Consultant
317-233-7825
jbutwin@isdh.state.in.us

*Artificial Insemination Law
*Emergency Responder Law
Hepatitis B/Hepatitis B in pregnant women
Hepatitis C
Hepatitis D
Hepatitis, viral unspecified
*Infection Control Issues
*Infectious Waste Law
Methicillin Resistant *Staphylococcus aureus* (MRSA)
*Tattoo and Body Piercing Law
*Universal Precaution Law
Vancomycin Resistant *Staphylococcus aureus* (VRSA)
(level ≥ 8µg/ml)
*Vancomycin Resistant *Enterococcus* (VRE)

James Howell, DVM—Veterinary Epidemiologist
317-233-7272
jhowell@isdh.state.in.us

Animal Bites
Anthrax
Babesiosis
Bioterrorism Issues
Brucellosis
^*Cryptococcus neoformans*
*Dengue Fever
Encephalitis, arthropod-borne
Ehrlichiosis

Hantavirus Pulmonary Syndrome
Histoplasmosis
Leptospirosis
Lyme Disease
Plague

Psittacosis
Q Fever
Rabies, animal and human
Rabies, postexposure treatment
Rocky Mountain Spotted Fever
Tularemia
Typhus, endemic and epidemic

Thomas Kerr, BS, RN—Chief Nurse Consultant
317-233-7583
tkerr@isdh.state.in.us

*Communicable Disease Manual Coordinator
*Employee Health Policy
Hansen's Disease (Leprosy)
Meningitis, aseptic
Meningococcal Disease, invasive
*Scarlet Fever
*School Health Liaison
Staphylococcus aureus
Streptococcus, Group A invasive disease
Streptococcus, Group B invasive disease
Toxic Shock Syndrome

Pamela Pontones, MA, RM(AAM)
Epidemiologist
317-233-7009
ppontones@isdh.state.in.us

*Amebiasis
Botulism
Campylobacteriosis
Cholera
^*Clostridium perfringens*
**Clostridium difficile*
Cryptosporidiosis
Cyclosporosis
E. coli infections
Gastrointestinal outbreaks
(including foodborne and waterborne)
*Giardiasis
Hemolytic Uremic Syndrome, postdiarrheal
Hepatitis A
*Hepatitis E
Legionellosis
Listeriosis
Salmonellosis
Shigellosis
Trichinosis
Typhoid Fever
^*Vibrio* species
Yersiniosis

Shawn M. Richards
Public Health Investigator
317-233-7740
srichard@isdh.state.in.us

*Adult Immunization Coordinator
*Cytomegalovirus
*Fifth Disease (Parvovirus B19)
*Hand, Foot and Mouth Disease (Coxsackie virus)
*Influenza Pandemic Planning
*Influenza Surveillance Coordinator
*International Travel Issues
Malaria
*Mononucleosis (Epstein-Barr virus)
*Pediculosis (lice)
*Respiratory Syncytial Virus (RSV)
*Scabies
Yellow Fever

Wayne Staggs, MS—Epidemiologist
317-233-7112
wstaggs@isdh.state.in.us

Diphtheria
Haemophilus influenzae B (Hib), invasive disease
Measles
Mumps
Pertussis (whooping cough)
Polio
Rubella
Rubella, congenital syndrome
Smallpox
Streptococcus pneumoniae, invasive disease
Tetanus
Varicella and shingles (hospitalization or death)
*Varicella and shingles infection

^Indicates disease agent reportable by laboratories only

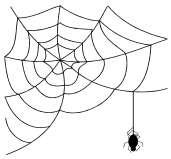
*Indicates disease/condition is not reportable by physicians and hospitals or laboratories

ISDH Immunization Program Announces the "Fall 2002 Immunization Awards Conferences"

Date & Location	*Featured Speakers*
October 21, 2002 **Oakwood Inn Lake Wawasee** **Syracuse, IN**	**James Conway, M.D.** **Indiana University Medical School** **Donna Weaver, R.N.** **Centers for Disease Control and Prevention (CDC)**
October 23, 2002 **Lakeview Holiday Inn** **Clarksville, IN**	**Richard Clover, M.D.,** **Advisory Committee on Immunization Practices** **Donna Weaver, R.N.** **Centers for Disease Control and Prevention (CDC)**
October 25, 2002 **University Inn** **West Lafayette, IN**	**Chris Belcher, M.D.** **Pediatric Infectious Diseases** **St. Vincent's Hospital, Indianapolis** **Raymond Strikas, M.D.,** **Centers for Disease Control and Prevention (CDC)** **Donna Weaver, R.N.** **Centers for Disease Control and Prevention (CDC)**

REGISTRATION REQUIRED

Contact Sharon McGovern at (317) 514-7300 or Beverly Sheets (317) 501-5722.



Wonderful Wide Web Sites

ISDH Data Reports Available

The ISDH Epidemiology Resource Center has the following data reports and the Indiana Epidemiology Newsletter available on the ISDH Web Page:

http://www.statehealth.IN.gov (under Data and Statistics)

Indiana Cancer Incidence Report (1990, 95,96)

Indiana Cancer Mortality Report (1990-94, 1992-96)

Indiana Health Behavior Risk Factors (1995-96, 97, 98, 99, 2000)

Indiana Hospital Consumer Guide (1996)

Indiana Marriage Report (1995, 97, 2000)

Indiana Maternal & Child Health Outcomes & Performance Measures (1988-97, 1989-98, 1990-99)

Indiana Mortality Report (1999, 2000)

Indiana Natality Report (1995, 96, 97, 2000)

Indiana Induced Termination of Pregnancy Report (2000)

Indiana Natality/Induced Termination of Pregnancy/Marriage Report (1998, 1999)

Indiana Report of Diseases of Public Health Interest (1996, 97, 98, 99)

HIV Disease Summary

Information as of July 31, 2002 (based on 2000 population of 6,080,485)

HIV - without AIDS to date:

457	New HIV cases from August 2001 thru July 2002	12-month incidence	7.52 cases/100,000
3616	Total HIV-positive, alive and without AIDS on July 31, 2002	Point prevalence	59.47 cases/100,000

AIDS cases to date:

463	New AIDS cases August 2001 thru July 2002	12-month incidence	7.62 cases/100,000
3117	Total AIDS cases, alive on July 31, 2002	Point prevalence	51.27 cases/100,000
6752	Total AIDS cases, cumulative (alive and dead)		

REPORTED CASES of selected notifiable diseases

Disease	Cases Reported in July *MMWR* Week 27-30		Cumulative Cases Reported January - July *MMWR* Weeks 1-30	
	2001	2002	2001	2002
Campylobacteriosis	64	89	201	271
Chlamydia	877	1,026	8,896	9,322
E. coli O157:H7	8	8	39	28
Hepatitis A	8	1	48	31
Hepatitis B	5	1	27	19
Invasive Drug Resistant *S. pneumoniae* (DRSP)	11	16	128	121
Gonorrhea	404	468	3,713	4,034
Legionellosis	2	2	10	10
Lyme Disease	5	0	9	6
Measles	0	0	4	0
Meningococcal, invasive	3	0	25	22
Pertussis	7	2	27	24
Rocky Mountain Spotted Fever	0	1	1	1
Salmonellosis	73	65	265	250
Shigellosis	13	7	131	44
Syphilis (Primary and Secondary)	8	5	98	38
Tuberculosis	11	11	55	66
Animal Rabies	0	5 (5 bats)	1 (Bat)	12 (11 Bats 1 Skunk)

For information on reporting of communicable diseases in Indiana, call the *ISDH Communicable Disease Division* at (317) 233-7665.

Indiana
Epidemiology
Newsletter

The *Indiana Epidemiology Newsletter* is published by the Indiana State Department of Health to provide epidemiologic information to Indiana health professionals and to the public health community.